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ABSTRACT

The testing and measurement movement has certainly become important in United States education. Test scores are looked upon as being quite valuable in ascertaining student achievement, especially in the reading curriculum. Percentiles, standard deviations, stanine scores, and other indicators are given to show objectively how well the reading curriculum, teachers, and students are performing and to indicate progress made. An alternative to testing is to notice how well any individual, student or adult, reads in a functional setting, and this is perhaps more revealing of how well anyone can read. In addition to functional reading contexts, three other types of factors may be considered in ascertaining reading success: (1) other means of intelligence such as visual/spatial, logical/mathematical, or musical/rhythmic; (2) portfolios of student work including feedback; and (3) different student motivators such as thinking, feeling, sensing, and intuition. There are numerous approaches that teachers need to use to motivate students to achieve as optimally as possible. (EF)

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Testing Versus Functional Approaches in Determining Reading Progress.

by Marlow Ediger

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TESTING VERSUS FUNCTIONAL APPROACHES IN DETERMINING READING PROGRESS

The testing and measurement movement has certainly become important in United States education. Test scores are looked upon as being quite valuable in ascertaining student achievement, especially in the reading curriculum. A numerical score then provides information on how well teachers are doing in the teaching of reading and how well students are learning to read. Generally, percentiles are given to show objectively how well the reading curriculum is operating and performing. In addition to percentiles, standard deviations, stanine scores, as well as other derived indicators may be used to indicate learner progress in reading. Are there other ways than testing to reveal student achievement in reading? Yes.

One can notice how well any individual, student or adult, reads in a functional setting. Perhaps, this is much more revealing of how well anyone can read. In the classroom setting, at the work place, and in clubs and organizations in society, individuals definitely indicate how well they can read, silently and orally, without previous practice.

Testing to Reveal Student Reading Progress

Most states give reading achievement tests at selected grade levels as students go through the different levels of schooling. These tests may/may not have the necessary validity and reliability data to substantiate the quality of their tests. Test results may be made available to the public through a report card. The report card shows how well each school district is doing in student achievement. An average score or percentile is then given. Competition is being advocated among school districts when making these comparisons. The testing of individuals as well as of school districts, and in making a use of test results, has as a purpose to motivate teachers to do a better job of teaching. "Higher standards are necessary for students to achieve optimally," has become a slogan in education. "Raising the bar" to use a track and field events metaphor has become a motto. How high the bar is to be raised has never been clarified. The bar from test results can be raised to a point where few would pass or lowered to where almost everyone would be successful (Ediger, 1997, 110-115)

Weaknesses of state mandated testing are the following:

1. they are given very infrequently, such as every other year at the most for a specific grade level, to truly indicate where a student is in reading achievement.
2. they provide a percentile which hardly indicates how well a student is doing in reading. For example, if a student is on the fiftieth percentile in reading test results, this does not say much. Thus, the

questions arise as to what specifically is the student strong in as well as weak.

3. they do not reveal which areas precisely need diagnosis and remediation. Diagnosis and remediation information provides teachers with data on which objectives to stress in the teaching of reading.

4. they emphasize isolated bits of information for students to be tested on. One paragraph for students to read on the test and the related questions to check comprehension are isolated from the second and other sequential paragraphs.

4. they do not stress functional reading whereby use can be made of what has been read in practical, utilitarian situations.

5. they put students on the "spot" with on demand recall information.

In an article entitled "U. S. student writing falls short of NAEP (National Assessment of Educational Progress) goals, the following rather dismal test results were reported:

The results showed that only one % of the fourth, eighth, and twelfth graders tested reached the advanced level. The proficient level or above was reached by 23 per cent of the fourth graders, 27 per cent of the eighth graders, and 22 per cent of the 12th graders.

The basic level or above was reached by 84 per cent of the fourth graders, 84 per cent of the eighth graders, and 78 per cent of the twelfth graders. The basic level was not attained by 16 per cent of the fourth graders, 16 per cent of the eighth graders, and 22 per cent of the 12th graders (*Reading Today* , 1999-2000).

Under the title of the article named above is the following: Most U.S. student fail to meet expectations for writing set by the National Assessment of Educational Progress, but process writing, portfolios, and other popular teaching strategies shown to boost performance.

There certainly are a plethora of questions which arise when looking at test results, including writing:

1. How high should student achievement be to achieve the advanced, proficient, basic levels, and below? Tests can be written so the bar is raised and very few pass or made much easier so that most pass.

2. How valid is the NAEP test? Thus to measure writing skills of students, which items should be in/on a test?

3. How much information on student achievement can be obtained from testing? For example, workers at the work place are not tested to see how well they do their jobs, rather the actual doing is evaluated.

4. How well do these same students write when a functional situation is involved, such as the actual writing and sending a friendly

letter?

5. How much agreement is there among evaluators of student written products, such as interrater or interscorer reliability?

6. How well do students, in testing, accept the test writers' purposes as compared to their very own reasons for writing in a functional situation?

7. How much feasible assistance can students receive in writing when class sizes are very large, especially in English/language arts classes?

8. How can test results given numerically such as a student being on the fiftieth per centile, provide feedback to teachers as to what a student needs specific help in, in the area of writing?

9. How can a testing situation be compared with a functional situation in writing?

10. How can factors such as interest, individual differences, learning styles, multiple intelligences, and purpose be incorporated into a testing situation. In functional writing, there are opportunities for a good writing teacher to take care of and incorporate these psychological ideals.

In Curriculum Update (Summer, 2000), an article entitled "Before It's Too Late: Giving Reading a Last Chance, the 1998 Nation's Report Card on Reading, issued by the National Assessment of Educational Progress (NAEP) shows that 26 per cent of US eighth graders and 23 per cent of 12th graders were reading below the basic level. This means they could not necessarily demonstrate an understanding of the meaning of a text, draw out its main idea, make inferences, and relate their reading to personal experiences. In some inner city schools, 80 per cent or more of of the students fail to meet grade level reading standards, according to researchers.

When 26, 23, and 80 percent, see above, do or do not do a certain thing, there are always sampling errors even though a random sampling research approach may have been used. Thus, one sample is different from other samples drawn from a pool of considered students.

Second, reading below the basic level does not state the complexity level of content used to have students understand the meaning of a text, develop a main idea, make inferences, and relate reading to their own personal experiences.

Third, if 80 per cent of inner city students fail to read on grade level, this may be typical of achievement in poorer urban areas. Students in suburban schools show very high achievement indeed. They have grown up and lived in a culture where a more favorable environment exists which harmonizes with what a school expects in learner achievement. Reading on grade level represents the mean or average of student achievement in reading. Then, there are students

who read well above the mean in degrees, as well as those who read, in degrees, below the mean. How much below the mean or average, inner city students would then read does make for a conjecture. When a school system desires to have all students be on the fiftieth percentile of higher, something has to give. For example, standardized tests are developed based on a normal distribution whereby out of each 100 students, fifty will be above and fifty below the mean. If everyone is to be on/above the fiftieth percentile, then new norms will need to be established. Then fifty percent will be above and fifty percent below the mean.

Reading on grade level works the some way; fifty per cent will be above and fifty percent below that average or mean. If all read on grade level, on a standardized test, new norms will need to be established. Grade equivalents indicate a normal distribution, fifty percent will be above and fifty per cent below the mean or average.

With the high standards and high expectations for student achievement, states need to be careful in having realistic standards for learners to attain. For example, the J.E. B. Stuart High School in Fairfax, Virginia has established that all students are to read on grade level by the eleventh grade. Reading on the eleventh grade level means that one can read almost anything. Picking up an eleventh grade English textbook to read requires high reading skills indeed. One can then read almost all content with meaning. For <u>all</u> students to read on the eleventh grade level is setting high standards, but are these realistic?

Functional Reading

Testing students to ascertain reading achievement may be one way to assess progress in learning. However, it is not endowed with realism in life. A chief executive officer (CEO) in the business world world is definitely not be tested using a paper/pencil test to reveal competency. He/she is assessed in terms of quality of work performed generally. Why should public school students not be assessed in a similar manner? Certainly, there are ample situations whereby students may be assessed through functional situations. A few months ago, the writer brought his nine year old car for repair work. The mechanic, after diagnosing the problem, stated he would need to get a manual for the 1991 model car from the archives. By looking at the manual, one notices quickly how complex the sentences are to acquire meaning. It was a marvel the automobile mechanic could quickly read the needed content to go ahead and complete repair work on the car. A quick estimate of the reading level of these materials was approximately the eleventh/ twelfth grade. Functional reading was involved here in that the mechanic needed to read the manual content to complete work on a car. He was

not tested using a paper/pencil test to determine how well he could repair the car. The test used instead was, "Could he actually repair the car to work in a satisfactorily manner for the consumer?" My first cousin who grew up as and still is a very devout General Conference Mennonite made Ds and Fs in high school mathematics classes. He became a leading contractor, putting in many, many estimates to secure contracts for building churches, office buildings, large and small houses, among other structures. This contractor did his own estimating of costs to submit final bids. The author's contention is that submitting bids in detail is much more complex as compared to completing paper/pencil assignments in high school mathematics And yet,my cousin was a great success in one and a failure in the other. Which is the more important? One experience is strictly abstract while the other is functional/practical.

The author received the rank of State Farmer in the Future Farmers of America (FFA), open only to two per cent or less of the membership in any state. Along with this, he was awarded a scholarship to Kansas State Agricultural College (KSAC), now Kansas State University, at Manhattan, Kansas. The author was also third high in 1946 in FFA livestock judging at KSAC, but his profession was not to be in agriculture or farming, but rather became Professor of Education at Truman State University, Kirksville, Missouri. The paradox was that the author never farmed after high school/college graduation, but his brother made all of his income from farming with no outside job. It takes a genius today with extremely low farm prices to make a living from farming only. Most farmers today have another job such as in a nearby small town, and/or their wives help with "putting the bread on the table."

There are researchers who became concerned with learning styles (See Dunn and Dunn, 1979). Here, eighteen elements of learning styles were identified. It behooves educators to notice under which conditions students learn best. Learning styles theory has much to offer and consider, as does multiple intelligences theory (See Gardner, 1993). Gardner is interested in having all elements of different intelligences show that students possess. Too frequently, only one intelligence is permitted in test taking and that is verbal intelligence with strong emphasis placed upon reading. Additional intelligences that students possess and teachers need to provide for and stress are the following, according to Gardner, with brief explanations given by the author:

1.visual/spatial, such as in geometry and art work. Practical applications include architecture, contractors, and carpenters, among others.

2. logical/mathematical, such as in philosophy, mathematics theoretical and practical, as well is in every day decisions that are made in society. Sound as well as faulty logic may be used. The latter needs analyzing and changing.

3. musical/rhythmic, such as those who do well in

vocal/instrumental music, as well as in different forms and types of dance. Musical/rhythmic intelligence certainly has received a back seat in the school curriculum due to patrons not perceiving the values of these intelligences.

4. interpersonal, such as students who achieve more optimally and reveal learnings better in group/committee endeavors as compared to individual work.

5. intrapersonal, whereby a student achieves more highly on an individual basis with this kind of intelligence. Educators, especially university professors, have tended to go overboard on cooperative learning as compared to recognizing that strengths in learning for some reside in individual achievement.

6. bodily/kinesthetic, such as athletic prowess and/or using the gross/finer muscles proficiently. In society, there are many kinds of work in which manual dexterity is of utmost importance. Too stress the academics only, as a slogan, in teaching students is to waste the time and talents of many learners.

7. scientific intelligence, such as interest in and proficiency in the natural world. The author growing up with a strong agricultural, farming culture realizes how important it is to farm in a scientific way to increased farm yields, from fifteen bushels of wheat per acre to ninety bushels! Even in every day life, if the author cannot unscrew a lid on canned fruit/vegetable containers, he puts that part under hot, running water using the faucet, and bingo the container is opened! Or a wrench is used to apply the force of physics and again the lid is opened.

I had made an electrical question/answer board whereby the student would need to connect the terminals to respond correctly to a question in the social studies.When teaching in a two teacher school in rural Kansas in the middle 1950s, there was a Holdeman Mennonite boy who was very disinterested in social studies.Very quietly, the boy asked if he could turn the question/answer board around and see how it is wired, then he could answer every question correctly. He knew principles of electricity, even though little concern was shown for the social studies. Culture influences what is considered important since Holdeman Mennonites, where eighth grade education is terminal, take strong interest in arithmetic since it is useful in every day life on the farm.

There are so many factors to take into account when teaching students, other than high standards/high expectations, and test scores to indicate learner achievement.

Somewhat opposite of testing students to notice achievement is the use of portfolios. Portfolios are generally developed by the involved students with teacher guidance. Here, everyday work of the student is placed into the portfolio. Items chosen for inclusion need to be selected carefully to avoid too much bulk. The following are examples of what

might become an inherent part of a portfolio:

1. written products of poetry, prose, narrative content , expository writing, among other purposes.
2. cassette recordings of book reports, discussions, and oral presentations on a variety of topics, among additional purposes involving oral use of language.
3. art work as it relates directly to different units of study being pursued.
4. construction products to indicate facts, concepts, and generalizations studied.
5. video tapes of committee and cooperative learning sessions.
6. statement of self evaluation in ongoing lessons and units of study.
7. teacher written appraisal comments of specific student achievement.
8. student written goals for future achievement and progress.

With portfolio products and processes, teachers and parents can observe specifically what a student has accomplished and what is left to learn. There is more to diagnosis than looking at a percentile to notice student achievement. Thus, what students are working on presently may be viewed, looked at, and appraised, be it a paragraph written by the student or a recording of actual progress in oral reading experiences (Ediger, 2000, 22-31).

Additional Considerations in Education

George, Lawrence, and Bushnell (1998), discuss four different motivators for students in the school curriculum and in society. The "thinking" set desires logically arranged materials of instruction. Cause an effect are two key words in discussions. Open ended, objective discussions need to be in the offing. When this fails, needs of students are not being met. Drawing analogies that are rational are important in ongoing lessons and units of study for the thinker.

A second kind of motivator for learning for selected students is feeling. The feeling dimension indicates attitudes, values, and beliefs that kindle interests of some students and provide increased energy levels for further learning. These students desire a caring environment whereby teachers and students possess warmth and assist each other due to feelings of care and acceptance. Group cohesiveness, sharing, feelings of belonging and being recognized for valuing each person become motivating factors in school life. Doing the opposite may turn students off who possess the feeling dimension as a major objective in the curriculum.

Sensing, is a predominate motivator for a third group of students.

These students, like others may well like logic in learning as well as highly value the feeling dimension, but they above all value the practical. They like to learn what has application in school and in society. Merely learning abstract subject matter may have little value. What is learned needs to have a practical application. Utilitarian learnings possess what is deemed to be very important. The concrete, rather than abstractions, might well emphasize that which is practical to the learner and can be applied in a useful situation.

Intuition is a fourth motivator as a major factor for a fourth group of learners. These students might well appreciate logical thinking, the feeling dimension, and sensing, but above all like to be inspired. Too many students go through the motions of learning but do not feel inspiration. There needs to be something that sparks the imagination.

Thus, there are numerous approaches that teachers need to use to motivate students to achieve as optimally as possible. Students differ from each other in many ways and one way is how they are motivated to learn. It behooves the teacher to devise strategies in teaching which will provide motivation for each and every learner.

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